

LGC-0003

REMARKS

Claims 1-36 are pending in the present Application. Claims 2-5, 11, 12, 14-18, 20-23, 29, 30, and 32-36 have been canceled and Claims 1, 10, 13, 19, 28, and 31 have been amended, leaving Claims 1, 6-10, 13, 19, 24-28, and 31 for consideration upon entry of the present Amendment. No new matter has been introduced by these amendments. For example, Claim 1 has been amended to include the features of Claim 4, Claim 10 has been amended to include the features of Claims 11 and 12, Claim 19 has been amended to include the features of Claim 22, and Claim 28 has been amended to include the features of Claims 29 and 30. Support for the amendment to Claims 1 and 19 regarding the position of the resistor can be found at least in Figure 1 as originally filed. Furthermore, Claims 13 and 31 have been amended to reflect the correct dependency.

Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Objection to the Drawings

The drawings have been objected to for not showing every feature specified in the claims. Specifically, the optically isolated field effect transistor of Claim 2 is not shown in the drawings.

The objection to the drawings has been rendered moot in view of the cancellation of Claim 2.

First Claim Rejection Under 35 U.S.C. § 102(b)

Claims 1, 2 and 19-20 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 5,705,914 to Morita (hereinafter "Morita"). Applicants respectfully traverse this rejection.

The rejection to Claims 2 and 20 has been rendered moot by the cancellation thereto. Furthermore, the rejection to Claims 1 and 19 has been rendered moot by the amendments thereto.

LGC-0003

Specifically, the features of Claim 4 and 22, which are not disclosed by Morita, have been incorporated into Claims 1 and 19, respectively.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1 and 19.

Second Claim Rejection Under 35 U.S.C. § 102(b)

Claims 1, 3, 6, 19, 21 and 24 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 6,121,752 to Kitahara et al. (hereinafter "Kitahara"). Applicants respectfully traverse this rejection.

The rejection to Claims 3 and 21 has been rendered moot by the cancellation thereto. Furthermore, the rejection to Claims 1, 6, 19, and 24 has been rendered moot by the amendments to independent Claims 1 and 19. The features of Claim 4 and 22, which have been incorporated into Claims 1 and 19, respectively, are also absent from Kitahara.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1, 6, 19, and 24.

Third Claim Rejection Under 35 U.S.C. § 102(b)

Claims 1, 4, 5, 19, 22, and 23 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 5,844,399 to Stuart (hereinafter "Stuart"). Applicants respectfully traverse this rejection.

Specifically, the rejection to Claims 4 and 22 has been rendered moot by the cancellation thereto. Therefore, Applicants respectfully traverse the rejection to Claims 1, 5, and 19.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987). Currently amended independent Claim 1 is directed to a method for managing a battery system comprising using a solid state relay as a switch during an operation of said battery system, wherein said operation is a

LGC-0003

buck, and wherein said switch completes a circuit comprising a first side of a battery cell, a resistor directly connected to said switch, and a second side of the battery cell. Furthermore, currently amended independent Claim 19 is directed to a battery management system comprising a solid state relay configured to function as a switch during an operation of said battery management system wherein said operation is a buck, and wherein said solid state relay completes a circuit comprising a first side of a battery cell, a resistor directly connected to said switch, and a second side of a battery cell.

Applicants assert that Stuart fails to disclose a resistor *directly connected* to a switch, during a buck operation. As evidenced in Figure 1, along with the relevant description in Column 4, lines 39-46 of a buck stage, there is no resistor directly connected to a switch. For convenience, the portion of Stuart's system relating to the buck stage has been reproduced as shown below.

The buck stage 13 is connected to the boost stage 12 and provides short circuit protection of the battery charger 10 and current controlled charging over a wide range of battery voltages. The buck stage 13 includes a semiconductor switching device Q2, preferably an IGBT or a BJT, connected to the boost stage 12, a diode, D2, connected to Q2, an inductor, L₂, connected to Q2 and a capacitor, C2, connected across the diode, D2, and the inductor, L₂.

(Stuart, Column 4, lines 39-46)

As described in Stuart, there is no disclosure of a resistor, let alone a resistor directly connected to a switch in the buck stage. Because Stuart does not disclose this particular feature, Stuart cannot disclose each and every element of currently amended independent Claims 1 and 19. Therefore, these claims, and those dependent therefrom, are not be anticipated by Stuart.

Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1, 5, and 19.

LGC-0003

Fourth Claim Rejection Under 35 U.S.C. § 102(b)

Claims 1, 7, 8, 19, 25, and 26 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 6,215,282 to Richards et al. (hereinafter "Richards"). Applicants respectfully traverse this rejection.

This rejection has been rendered moot by the amendments to independent Claims 1 and 19. The features of Claim 4 and 22, which have been incorporated into Claims 1 and 19, respectively, are also absent from Richards.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1, 7-8, 19, and 25-26.

Fifth Claim Rejection Under 35 U.S.C. § 102(b)

Claims 1, 9, 19 and 27 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 6,340,889 to Sakurai (hereinafter "Sakurai"). Applicants respectfully traverse this rejection.

This rejection has been rendered moot by the amendments to independent Claims 1 and 19. The features of Claim 4 and 22, which have been incorporated into Claims 1 and 19, respectively, are also absent from Sakurai.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1, 9, 19, and 27.

Sixth Claim Rejection Under 35 U.S.C. § 102(b)

Claims 10, 12-14, 17, 28, 30-32 and 35 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 5,469,042 to Ruhling (hereinafter "Ruhling"). Applicants respectfully traverse this rejection.

LGC-0003

The rejection to Claims 12, 14, 17, 30, 32, and 35 has been rendered moot by the cancellation thereto. Furthermore, the rejection to Claims 10, 13, 28, and 31 has been rendered moot by the amendments to independent Claims 10 and 28. Specifically, the features of Claim 11 *inter alia* and 29 *inter alia*, which have been incorporated into Claims 10 and 28, respectively, are absent from Ruhling.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 10, 13, 28, and 31.

Seventh Claim Rejection Under 35 U.S.C. § 102(b)

Claims 10, 11, 28 and 29 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by US Patent No. 6,459,236 to Kawashima (hereinafter Kawashima). Applicants respectfully traverse this rejection.

The rejection to Claims 11 and 29 has been rendered moot by the cancellation thereto. Furthermore, the rejection to Claims 10 and 28 has been rendered moot by the amendments thereto. Specifically, the features of Claim 12 *inter alia* and 30 *inter alia*, which have been incorporated into Claims 10 and 28, respectively, are absent from Kawashima.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 10 and 28.

Eighth Claim Rejection Under 35 U.S.C. § 102(b)

Claims 14-16, 18, 32, 33, 34 and 36 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by Ouwerkerk (US 5,498,950). Applicants respectfully traverse this rejection.

The rejection to Claims 14-16, 18, 32, 33, 34 and 36 has been rendered moot by the cancellation thereto.

LGC-0003

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By 

Dean Y. Shahriari

Registration No. 56,783

Date: November 21, 2005
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (404) 607-9991
Facsimile (404) 607-9981
Customer No.: 23413